

AMENDMENTS TO THE CLAIMS

The claims in this listing will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) A heat generating apparatus, comprising:
 - a heat generating member;
 - an exciting coil provided opposite to the heat generating member and serving to cause the heat generating member to generate heat by electromagnetic induction;
 - a thermostat provided in the vicinity of the heat generating member and serving to stop supply of [[a]] power to the exciting coil when a temperature abnormality of the heat generating member is detected;
 - a power circuit having comprising a rectifying circuit, a resonance circuit and a smoothing circuit and serving to control the supply of the power to the exciting coil, wherein the resonance circuit is connected in parallel with the exciting coil, one end of the smoothing circuit being connected to the resonance circuit and the exciting coil, and another end of the smoothing circuit being directly connected to the rectifying circuit; and
 - a lead wire connecting the exciting coil, the thermostat and the power circuit,
 - wherein the thermostat is electrically connected between the rectifying circuit and the smoothing circuit.

2. (Currently Amended) The heat generating apparatus according to claim 1, wherein the exciting coil is connected to the power circuit with the lead wire and a second lead wire, and the thermostat is connected to the power circuit with the lead wire and a third lead wire the lead wire shares one of two wires connecting the exciting coil to the inverter power circuit and two wires connecting the thermostat to the inverter power circuit.

3. (Currently Amended) The heat generating apparatus according to claim 1, wherein the lead wire connects to a connector comprising at least four pins, two of the pins connect the exciting coil to the power circuit, and two of the pins are configured to connect the thermostat to the power circuit, wherein one of the two pins configured to connect the thermostat to the power circuit is designated for a first supply voltage, and the other pin is designated for a second supply voltage, thereby preventing an erroneous connection of the exciting coil to the power circuit includes a connector containing at least four pins having two lead connecting the exciting coil to the inverter power circuit and one wire connecting the thermostat to the inverter power circuit, and changes a connecting position of the connector having one wire connecting the thermostat to the inverter power circuit depending on a supply voltage and prevents an erroneous connection of the exciting coil to the inverter circuit based on the supply voltage.

4. (Currently Amended) The heat generating apparatus according to claim 1, wherein the lead wire connects to a connector comprising two pins that connect the exciting coil to the power circuit, and two pins configured to connect the thermostat to the power circuit, wherein one of the two pins configured to connect the thermostat to the power circuit is designated for a first supply voltage, and the other pin is designated for a second supply voltage, thereby preventing an erroneous connection of the exciting coil to the power circuit includes a connector containing two pins having two wires connecting the exciting coil to the inverter power circuit and a connector containing at least two pins having one wire connecting the thermostat to the inverter power circuit, and changes a connecting position of the connector having one wire connecting the thermostat to the inverter power circuit depending on a supply voltage and prevents an erroneous connection of the exciting coil to the inverter circuit based on the supply voltage.

5. (Currently Amended) A heat generating apparatus, comprising:
a heat generating member;
an exciting coil provided opposite to the heat generating member and serving to cause the heat generating member to generate heat by electromagnetic induction;
a first power source for supplying [[a]] power to the exciting coil;
a power circuit comprising a rectifying circuit, a resonance circuit and a smoothing circuit, wherein the resonance circuit is connected in parallel with the

exciting coil, one end of the smoothing circuit is connected to the resonance circuit and the exciting coil, and another end of the smoothing circuit is directly connected to the rectifying circuit;

a switching unit for switching ON/OFF of the supply of the power from the first power source to the exciting coil;

a second power source for driving the switching unit; and

a thermostat for stopping the supply of the power from the first power source to the exciting coil when the heat generating member exceeds a predetermined temperature.

6. (Original) The heat generating apparatus as claimed in claim 5, further comprising:

a switching unit voltage detecting circuit which detects that a voltage to be applied to the switching unit exceeds a safe operating voltage range; and

a control circuit which controls a power to be supplied to the coil in response to a detection signal of the switching unit voltage detecting circuit.

7. (Currently Amended) The heat generating apparatus according to claim 6, wherein when the switching unit voltage detecting circuit detects that the safe operating voltage range of the switching unit is exceeded, the control circuit limits the supply of the power to the exciting coil to carry out a control in such a manner that the voltage to be applied to the switching unit is maintained within maintains a the safe operating voltage range limitation.

8. (Currently Amended) The heat generating apparatus according to claim 6, wherein when the switching unit voltage detecting circuit detects that the safe operating voltage range of the switching unit is exceeded, the control circuit detects the supply of the power to the exciting coil and makes attenuates the voltage to be applied to the switching unit ~~attenuate on an optional to a~~ level within a safe operating voltage range limitation.

9. (Original) The heat generating apparatus according to claim 6, wherein when the switching unit voltage detecting circuit detects that the safe operating voltage range of the switching unit is exceeded, the control circuit stops the supply of the power to the exciting coil.

10. (Currently Amended) An electromagnetic induction heating fixing apparatus for an image forming apparatus, comprising:

- a heat generating member;
- an exciting coil provided opposite to the heat generating member and serving to cause the heat generating member to generate heat by electromagnetic induction;
- a thermostat provided in the vicinity of the heat generating member and serving to stop supply of [[a]] power to the exciting coil when a temperature abnormality of the heat generating member is detected;

a power circuit having comprising a rectifying circuit, a resonance circuit and a smoothing circuit and serving to control the supply of the power to the exciting coil, wherein the resonance circuit is connected in parallel with the exciting coil, one end of the smoothing circuit being connected to the resonance circuit and the exciting coil, and another end of the smoothing circuit being directly connected to the rectifying circuit; and

a lead wire connecting the exciting coil, the thermostat and the power circuit,

wherein the thermostat is electrically connected between the rectifying circuit and the smoothing circuit.

11. (Currently Amended) An image forming apparatus, comprising:
 - a photosensitive member;
 - a charger which uniformly charges a surface of the photosensitive member to have a predetermined electric potential;
 - an exposing unit which irradiates a scanning line of a light beam corresponding to image data on the charged photosensitive member, thereby forming electrostatic latent images;
 - a developer which develops the electrostatic latent images formed on the photosensitive member;
 - a cleaner which removes a toner remaining on the photosensitive member; and
 - an electromagnetic induction heating fixing apparatus, comprising:

a heat generating member;
an exciting coil provided opposite to the heat generating member
and serving to cause the heat generating member to generate heat by
electromagnetic induction;
a thermostat provided in the vicinity of the heat generating member
and serving to stop supply of [[a]] power to the exciting coil when a
temperature abnormality of the heat generating member is detected;
a power circuit having comprising a rectifying circuit, a resonance
circuit and a smoothing circuit and serving to control the supply of the
power to the exciting coil, wherein the resonance circuit is connected in
parallel with the exciting coil, one end of the smoothing circuit being
connected to the resonance circuit and the exciting coil, and another end
of the smoothing circuit being directly connected to the rectifying circuit;
and
a lead wire connecting the exciting coil, the thermostat and the
power circuit,
wherein the thermostat is electrically connected between the
rectifying circuit and the smoothing circuit.